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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/530,415

04/07/2005

Yuji Nagano

P27700

4904

7055 7590 05/14/2009
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EXAMINER

CHOI, STEPHEN

ART UNIT

PAPER NUMBER

3724

NOTIFICATION DATE

DELIVERY MODE

05/14/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
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Office Action Summary	Application No. 10/530,415	Applicant(s) NAGANO ET AL.	
	Examiner Stephen Choi	Art Unit 3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-13 is/are pending in the application.
- 4a) Of the above claim(s) 5 and 8-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-4, 6 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 24, 2009 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2-4 and 6-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 2 and 6, it is not clear what structure is set forth by "each of the left teeth having a left side surface at the dovetail shaped portion and each of the right teeth having a right side surface at the dovetail shaped portion so that each inclination angle of the left and right side surfaces is increased as a result of both the dovetail shape and set of the tooth tip". The inclination angle of the side surfaces is constant and does not appear to increase. The examiner respectfully suggests to further define "inclination angle".

Claim Rejections - 35 USC § 103

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-4 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 7-323403 (hereafter '403) in view of Hopper et al. (U.S. 6,520,722).

'403 discloses the invention substantially as claimed including left and right set teeth, each dovetail shaped set tooth having a gradually enlarged tooth tip and each of the left teeth having a left side surface at the dovetail shaped portion and each of the right teeth having a right side surface at the dovetail shaped portion so that each inclination angle of the left and right side surfaces is increased as a result of both the dovetail shape and set of the tooth tip (e.g., Figure 2). '403 fails to disclose a straight tooth including a dovetail shaped/bevel-dovetail shaped straight tooth having a tooth tip gradually enlarged in the lateral direction. Hopper teaches the use of a dovetail shaped/bevel-dovetail shaped straight tooth having a tooth tip gradually enlarged in the lateral direction (e.g., Figure 5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a straight tooth as taught by '623 on the device of '403 in order to provide better penetration rates to improve cutting efficiency. Furthermore, '403 fails to teach an upper surface of each tooth including the tooth tip defining a planar inclined surface. However, it would have been obvious matter of design choice to a person of ordinary skill in the art to modify the upper surface of each tooth including the tooth tip to be a planar inclined surface instead of the slightly

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curved surface because applicant has not disclosed the planar inclined surface provides an advantage, is used for particular purpose, or solves a stated problem. One of ordinary skill in the art would have expected the modified arrangement of '403 patent and applicant's invention, to perform equally well with either arrangement since both arrangements would have performed the same function. Regarding claims 3 and 7, the modified device of '403 fails to teach a height of each of the left and right set teeth being smaller than or substantially equal to that of the straight tooth. However, Hooper teaches that the height of teeth being lower than that of the preceding tooth (e.g., col. 6, lines 16-29). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the modified device of '403 to provide the height of set teeth being smaller than that of the straight tooth as taught by Hooper in order to facilitate enlarging of a kerf to improve passage of the blade.

Response to Arguments

6. Applicant's arguments filed April 24, 2009 have been fully considered but they are not persuasive.

Applicants contend that the teachings of Hopper and '403, alone or in any properly reasoned combination, do not disclose "the left teeth having a left side surface at the dovetail shaped portion and each of the right teeth having a right side surface at the dovetail shaped portion so that each inclination angle of the left and right side surfaces is increased as a result of both the dovetail shape and set of the tooth tip".

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The examiner respectfully disagrees. Figure 2 of '403 clearly teaches the left and right set teeth, each having dovetail shaped with inclined side surfaces. As set forth above, it is not clear what inclination angle is being increased.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Choi whose telephone number is 571-272-4504. The examiner can normally be reached on Monday-Friday 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer D. Ashley can be reached on 571-272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen Choi/
Primary Examiner, Art Unit 3724
8 May 2009